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# Ticks (Ixodida), larval trombiculids (Trombidida) and lice (Anoplura) from small mammals in the Čergov Mountains (Western Carpathians, Czechoslovakia)*

By

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The paper is dedicated to the memory of Tibor WEISZ (1914—1983).

ABSTRACT. Altogether 6461 specimens of ectoparasites (Ixodida, Trombidida and Anoplura) were collected from the bodies of a total of 382 small mammals (11 species) captured during three field trips between 1980 and 1982 in the Čergov Mts. There were 26 ticks (one species), 5981 trombiculids (7 spp.) and 454 lice specimens (4 spp.) among them. Neotrombicula elegans and Leptotrombidium silvaticum are new for Slovakia.

No literature data are available concerning the occurrence and distribution of the discussed groups of ectoparasites from the studied region. Data on the Trombiculidae of the eastern part of Slovakia were published by DANIEL (1961) and KOVÁČIK (1983). The faunistical data of the ticks, trombiculid mites and lice reported in this paper are the first ones for the Čergov Mts.

## MATERIAL AND METHOD

A total of 382 insectivores and rodents captured by snap traps were examined for ectoparasites. Investigation was carried out at three different localities and dates: Hertník 26-28 Aug., 1980; Lenartov 10-12 Nov., 1981 and Livov 20-23 April, 1982. For detailed locality and habitat descriptions, see by MÉSZÁROS & ŠTOLLMANN (1984).

The following numbers of host species were examined: Sorex araneus Linnaeus 46, S. minutus Linnaeus 7, S. alpinus Schinz 7, Neomys fodiens (Pennant) 9, N. anomalus Cabrera 1, Muscardinus avellanarius Linnaeus 1, Apodemus flavicollis (Melchior) 29, A. agrarius (Pallas) 9, Clethrionomys glareolus (Schreber) 209, Pitymys subterraneus (de Sélys-Longchamps) 57, Microtus arvalis (Pallas) 7. Among the examined hosts, 20 (5.2%) were infested by ticks, 197 (52.1%) by trombiculids and 72 (19.0%) by lice. The host species most infected by all groups of ectoparasites were C. glareolus (209 host specimens with 6099 parasites), P. subterraneus (40/162), M. arvalis (5/80) and S. araneus (4/37).

The ectoparasites were collected by the usual method and mounted in Swan's medium. The material of this study is deposited in the Research Station of the Institute of Experimental Biology and Ecology, Slovak Academy of Sciences, Staré Hory.

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## RESULTS

The prevalent part of the collected material is represented by 5981 specimens of larval trombiculids. They belong to the following 7 species: Hirsutiella multisetosa, Neotrombicula inopinata, N. talmiensis, N. elegans, Leptotrombidium europaeum, L. silvaticum. The most infested host species were microtine rodents (extensity and mean intensity of infestation in parenthesis): C. glareolus (80.8/27.7), P. subterraneus (40.3/1.58), M. arvalis (42.8/4.42).

Among the 454 specimens of lice (Anoplura), we have distinguished the following four species: Hoplopleura edentula (299 specimens, 65.8%), H. acanthopus (117 specimens, 25.8%), H. affinis (1 specimen, 0.2%) and Polyplax serrata (37 specimens, 8.1%). The most infested host species as regards lice were C. glareolus (25.9/1.42), P. subterraneus (19.2/0.86), M. arvalis (28.5/7.0) and A. flavicollis (28.0/1.8).

Six species of hosts were infested by one tick species - Ixodes trianguliceps, generally in low level of infestation.

Among the examined host species microtine rodents were infested by greater number of ectoparasite groups and species than any other species. We have found 10 species of ectoparasites on C. glareolus and 9 species on P. subterraneus of the discussed groups.

## SYSTEMATIC ACCOUNT

### IXODIDAE

Ixodes trianguliceps Birula, 1895

Collection data: Hertník 26-28 Aug., 1980 - A. flavicollis 1N; Lenartov 10-12 Nov., 1981 - S. araneus 3L, S. minutus 1L, C. glareolus 1L, 1N; Livov 20-23 April, 1982 - S. alpinus 3L, C. glareolus 4L, 5N, P. subterraneus 3L, 2N, 2♀.

### TROMBICULIDAE

Neotrombicula autumnalis Shaw, 1790

Collection data: Hertník 26-28 Aug., 1980 - C. glareolus 4.

Neotrombicula inopinata Oudemans, 1909

Collection data: Hertník 26-28 Aug., 1980 - A. agrarius 14, C. glareolus 2579, P. subterraneus 7; Lenartov 10-12 Nov., 1981 - S. araneus 2, C. glareolus 26.

Neotrombicula talmiensis Schluger, 1955

Collection data: Hertník 26-28 Aug., 1980 - C. glareolus 55.

Neotrombicula elegans Schluger, 1966

Collection data: Livov 20-23 April, 1982 - C. glareolus 7, P. subterraneus 7. N.elegans is recorded for the first time from Slovakia (Fig. 1).

Hirsutiella multisetosa Willmann, 1944

Collection data: Hertník 26-28 Aug., 1980 - C. glareolus 67, A. agrarius 2, P. subterraneus 4; Lenartov 10-12 Nov., 1981 - S. araneus 31, C. glareolus 1860, P. subterraneus 3, M. arvalis 31; Livov 20-23 April, 1982 - C. glareolus 1210, P. subterraneus 67.

Leptotrombidium europaeum Daniel & Brelich, 1954

Collection data: Livov 20-23 April, 1982 - P. subterraneus 2.

Leptotrombidium silvaticum Huscha & Schluger, 1967

Collection data: Hertník 26-28 Aug., 1980 - C. glareolus 2; Lenartov 10-12 Nov., 1981 - C. glareolus 1. L. silvaticum is a new species for Slovakia (Fig. 2).

### ANOPLURA

Hoplopleura acanthopus Burmeister, 1839

Collection data: Hertník 26-28 Aug., 1980 - C. glareolus 1♂, 1♀, P. subterraneus 4♂, 5♀; Lenartov 10-12 Nov., 1981 - M. arvalis 4♂, 1♀; Livov 20-23 April, 1982 - C. glareolus 3♂, 6♀, P. subterraneus 14♂, 35♀, M. arvalis 11♂, 33♀.

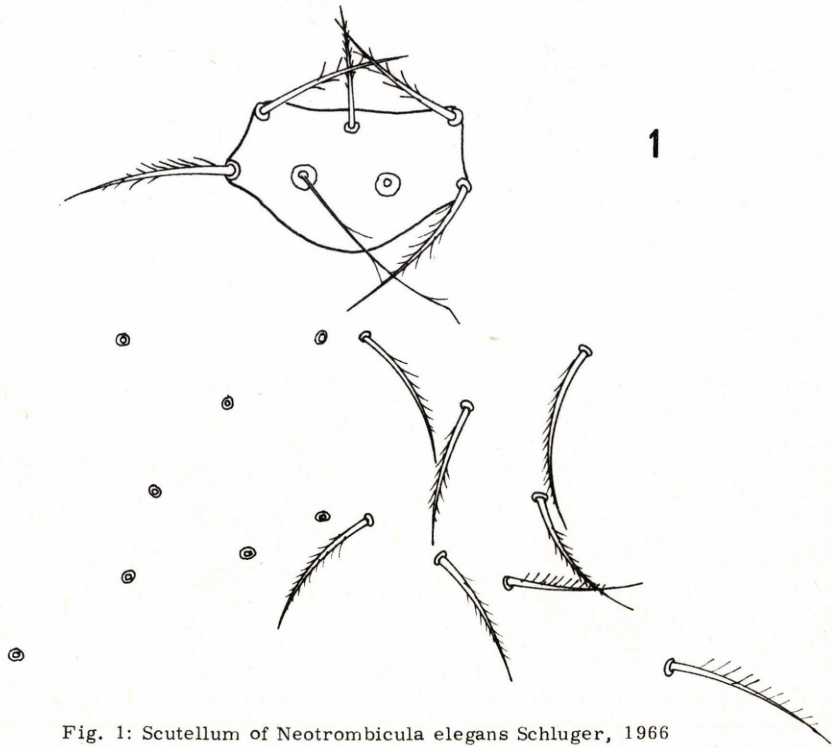


Fig. 1: Scutellum of Neotrombicula elegans Schluger, 1966

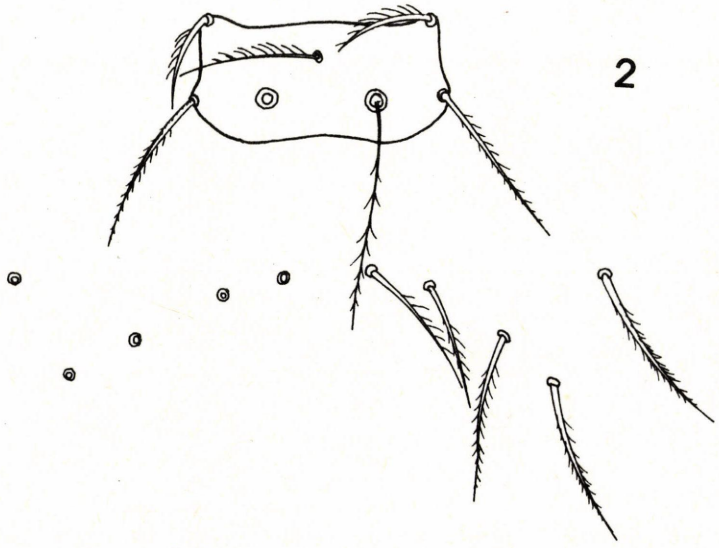


Fig. 2: Scutellum of Leptotrombidium silvaticum Huscha & Schluger, 1967

Hoplopleura edentula Fahrenholz, 1916

Collection data: Hertník 26-28 Aug., 1980 - A. flavicollis 8♀, C. glareolus 74♂, 134♀, P. subterraneus 1♀; Lenartov 10-12 Nov., 1981 - C. glareolus 10♂, 11♀; Livov 20-23 April, 1982 - C. glareolus 20♂, 37♀, P. subterraneus 1♂, 3♀.

Hoplopleura affinis Burmeister, 1839

Collection data: Hertník 26-28 Aug., 1980 - S. araneus 1♀.

Polyplax serrata Burmeister, 1839

Collection data: Hertník 26-28 Aug., 1980 - A. flavicollis 96, 25♀; Lenartov 10-12 Nov., 1981 - A. flavicollis 3♀.

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